Compare Bose-Style Straight-Line Array to CBT Curved-Line Array

Frequency Response vs. Distance vs. Height

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Harman Technology Meeting

High-Tech driven by Passion.
Arrays Compared

BOSE MA12-STYLE
STRAIGHT-LINE ARRAY

CBT 60°
CURVED-LINE ARRAY

1 m
Audience Area to Cover

16 m
(52.5 ft)
Audience Area to Cover
Where do you put the loudspeaker?
Conventional Hang and Tilt

Line Array Speaker
Bose MA12 Recommendation

Line Array Speaker
Bose MA12 Recommended Listener Location
Locate listener within a vertical location defined by the top and bottom of the array.

Place listeners within this vertical range.
Calculate Frequency Response at Different Distances and Heights

Equalize On-Axis Response at 4 m

Note: Both systems are modeled as continuous line sources.
Frequency Responses of Straight-Line Array

Equalized Flat Here

Height:

- 0.00 m
- ±0.25 m
- ±0.50 m
- ±0.75 m
- ±1.00 m
Frequency Responses of CBT Curved-Line Array

1 m  2 m  4 m  Equalized  8 m  Flat Here  16 m

Height:
- 0.00 m
- ±0.25 m
- ±0.50 m
- ±0.75 m
- ±1.00 m
The beamwidth and directivity of the straight-line array is strongly dependent on distance!
The beamwidth and directivity of the CBT array is independent of distance!